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ABSTRACT

The Colorado Migrant Health Program recruits, hires, trains, and supervises seasonal health practitioners in summer migrant education schools throughout the state. The health services provided include comprehensive health screening of all migrant school enrollees, treatment and follow-up for identified health problems, preventive dental services, and health education. Health education and counseling takes place not only at the school site but also during school family nights and in homes. School health providers work closely with local migrant health staff and local providers to assure quality, comprehensive health care for migrant students. Local migrant education staff and local health providers assure that any needed follow-up is provided after the summer program ends. This report contains the following sections: (1) health findings, changes, and highlights of the 1992 program; (2) health program overview; (3) health status of migrant education students; (4) health education curriculum and activities; (5) financial resources; and (6) plans for 1993. The appendix contains data tables that outline by school site the incidence and follow-up of specific medical and dental problems. (KS)

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ED 363 465

FINAL REPORT

MIGRANT EDUCATION HEALTH PROGRAM

- 1992 -

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INTRODUCTION

1992 marks the 20th consecutive year that the Colorado Migrant Education Program and the Colorado Migrant Health Program (CMHP) have collaborated in the planning and implementation of a comprehensive health program for migrant summer school students. This collaboration has continually increased over the past several years as both programs have grown to appreciate that regardless of administrative affiliation, funding resources, or individual organizational objectives, both programs share a common mission: to participate in enhancing the physical, mental, social and economic well-being of migrant farmworkers. Both programs acknowledge that this mission requires a major focus on migrant children.

Not only do children of migrant farmworkers face the typical diseases and health problems of childhood but, in addition, they confront numerous health problems and risks associated with their migratory lifestyle and the environmental hazards associated with agricultural work. They also face numerous social, cultural and linguistic barriers which often preclude their ability to access regular, comprehensive health care. It is clear that maximum educational achievement may be hindered by undiagnosed and untreated health problems. For example, the young migrant child with undiagnosed hearing or vision problems will obviously experience difficulty in learning, regardless of the quality of the educational program presented. Other less obvious but equally significant undetected health conditions such as anemia, respiratory infections, otitis media and dental disease also contribute to listlessness and distraction due to pain which may inhibit the education process. Although it is axiomatic that children in poor health will not achieve their full educational potential, it is also critically important to view the development of healthful lifestyles and health practices as essential elements of each child's educational experience.

Working on a contractual arrangement with the Colorado Migrant Education Program, the Colorado Migrant Health Program recruits, hires, trains, and supervises seasonal health practitioners in summer migrant education schools throughout the state. The health services provided include: comprehensive health screening of all migrant school enrollees, treatment and follow-up for identified health problems, preventive dental services, and health education. Emphasis is placed on involving the family in health care. Therefore, health education and counseling takes place not only at the school site but also during school family nights and in homes. School health providers work closely with local Migrant Health staff and local providers to assure quality, comprehensive health care for migrant students. Local migrant education staff and local health providers assure that any needed follow up is provided after the summer program ends.

Mutually supportive goals and the acknowledgment of the relationship between good health and the migrant child's ability to fully participate in the educational process set the stage for the 1992 Migrant Education Health Program.

The following sections detail the specific activities of the 1992 Migrant Education Health Program. This report is intended to meet the following general objectives:

1. To provide accountability to the Migrant Education Program that the health services provided were within the scope and financial estimates of the 1992 contractual agreement;

2. To share with Migrant Education staff and parents information gained about the relative health status and needs of migrant children in Colorado;

3. To provide an information base which will initiate planning efforts directed toward the 1993 Migrant Education Health Program.

SECTION I

HIGHLIGHTS OF 1992 PROGRAM

Significant health findings, changes, and highlights of the 1992 program are noted below. It is rewarding to note that over the years, there has been a general trend toward improvement in the overall health status of these children. Nonetheless, most of their health indices lag behind those for Colorado school children in general, reflecting the greater need for health services that continues to exist for migrant children.

HEALTH STATUS AND SERVICES

Vision

In 1992, vision screening was expanded to include additional tests. The expanded tests were done in order to coincide with new school vision testing recommendations for all Colorado school children. As in previous years, students were screened for distance visual acuity (to detect nearsightedness, amblyopia, and astigmatism). In addition, students were screened with the following tests: Plus Lens Test (to detect excessive farsightedness), Near Point of Convergance (to detect convergence insufficiency), Alternate Cover Test (to detect strabismus and heterophoria), and Stereo/Depth Perception (to detect amblyopia and poor ocular alignment).

As was the policy in previous years, the Colorado Migrant Health Program assisted with the purchase of eyeglasses for active migrant students only. If a status 3 student was found to have an abnormal vision screen, the nurse referred the student to the local migrant education staff. The migrant education staff was then responsible for working with the student, family, and community to arrange for eye exams and eyeglasses as needed.

The prevalence of abnormal vision among migrant school children was 13.4% in 1992. This compares to a 7.9% abnormal incidence rate in 1991. Part of this increase is due to additional vision abnormalities detected with the expanded tests. It should be noted, however, that 35% of the children referred to an optometrist or ophthalmologist for failing one of the vision screening procedures did not need any intervention. The reason for the apparent large number of false positive screening results is not exactly clear - analysis is currently underway to determine possible reasons.

The 1992 rate is significantly higher than the 6.0% rate observed among all Colorado school children during 1991-92. In 1992, 136 children received new glasses, and seven children had their eyeglass frames repaired.

Hearing

In 1992, 3.4% of migrant children attending the summer school program were determined to have abnormal hearing. This is a slight decrease from the 3.7% incidence rate observed in 1991. However, this is still higher than the 2.3% observed for all Colorado school children in 1991-92. The reasons for this increased prevalence among migrant children cannot be pinpointed with certainty, but it is likely that important contributing factors are: 1) due to poor access to health care acute ear infections are more likely to escape detection and may go on to develop complications including hearing loss, 2) crowded and unsanitary living conditions which facilitate transmission of communicable illnesses which in turn cause secondary hearing disorders, and 3) inability to afford interventions such as hearing aids or medical treatment.

Dental

The rate of children needing dental services was 57% in 1992. This rate has remained fairly constant over the past few years (60% in 1991, 60.5% in 1990, 59.3% in 1989, 59.5% in 1988). Once again the per cent of students needing emergency dental care dropped to 2%, the normal rate in this population.

Anemia

In 1992, criteria for anemia testing was changed. In past years, all children attending the summer migrant education program had received hematocrit testing for anemia. Over the years, the number of children found to be anemic has dropped substantially. (In 1991 only 2.2% of children screened were anemic.)

Therefore, after consulting with the Colorado Migrant Health Program Medical Advisory Board, it was decided that only those children who were considered to be at higher risk for anemia would be screened (any student whose home base is Mexico or any student who exhibits signs or symptoms of anemia).

In 1992, 268 children received a hematocrit test for anemia. Of the children screened, only four students (1.5%) were found to be anemic. All of these children received iron supplementation and family nutrition counseling. Upon checking the hematocrit level two to four weeks after beginning iron supplementation, the hematocrit level of all four students had improved.

Height and Weight

All students had their height and weight measurements taken and recorded on the Health Data Entry Form.

Students identified as being obese or underweight received one or more of the following interventions: one on one counseling, group counseling/support, family counseling.

TB Skin Testing

Due to the rise of tuberculosis on a national level, the TB Skin Testing policy was expanded in 1992 to screen more students. Children tested were those who were children of "active" migrant farmworkers (migrant status 1 or 2) who had not had a TB skin test in the past two years.

The number of positive TB skin tests for tuberculosis was 4.8% in 1992, compared to a 6.5% positive rate observed in 1991. Follow up was provided to 100% of the students who had a positive test.

Even though this was a decrease in incidence, the current screening criteria will be continued because of the high risk of tuberculosis in this population.

Scoliosis

In 1992, 12 students (4.1% of the students screened) had an abnormal scoliosis test. This compares to 1.4% of the students screened in 1991. Four of the students referred for an abnormal screen were confirmed to have scoliosis. For the other eight students, a definitive scoliosis diagnosis was not made.

Immunization Status

The nurses placed in the Migrant Education schools evaluated the immunization records of all children not in Colorado schools during the regular school year. This policy avoids duplication of the monitoring of immunization status required by the Colorado School Immunization Law. In 1992, 1,816 immunization records were evaluated and 236 children were given 458 needed immunizations.

Handicapped Children

Several migrant school children were identified as having handicapping conditions. Twelve new referrals were made to the Handicapped Children's Program for such conditions as ear problems, heart conditions, neurologic problems, seizure disorders, and cleft palate.

HEALTH PROFESSIONAL STUDENTS

In 1992, a total of 36 health professional students and interns/residents participated in the Migrant Education Program. This is nine more than participated in 1991. Those selected to participate in the program are highly motivated, independent, culturally sensitive, and have demonstrated a high level of competence in their academic and clinical training. Because of their skills and enthusiasm, these students make valuable contributions to health care delivery and health education.

In 1992, 11 nursing students from the University of Colorado and three students from Regis University School of Nursing were placed in Migrant Education schools throughout the state. In addition, 17 dental students or dental residents provided dental treatment to migrant education students. These dental students or residents came from the University of Colorado, Northwestern University, and the University of Texas Health Sciences Center at San Antonio.

Also this year, one medical student participated in a Health Promotion/Disease Prevention project through the American Medical Student Association. This student was placed in the Gilcrest night adolescent program where he provided health care and health education.

In addition, three nutrition interns working with Tri-County Health Department assisted the migrant education schools in Longmont, Brighton, and Ft. Lupton, and a health education intern was placed in Delta.

Students evaluating their community health experience with the Migrant Education Health Program see it as a valuable learning experience. Many students become providers in community or rural health care settings after graduation.

HEALTH EDUCATION

Teaching migrant children and their families about health and assisting them to develop healthful lifestyles is a high priority for the Migrant Education Health Program. In 1992, summer health team members held a total of 321 health education/promotion sessions that involved 6,372 people. These sessions involved classroom education and small group sessions, family night presentations, and staff inservices. It is gratifying that the number of classroom health education sessions increased from 1991 - an additional 51 sessions were conducted.

A detailed description of the health education activities is reported in the "Health Education" section of this report.

ADOLESCENTS

In a continuing effort to reach the migrant adolescent population, the CMHP again this year placed emphasis on the migrant education adolescent night school programs.

In the large Gilcrest program, a nurse, volunteer nurse practitioner, medical student, and three dental hygienists provided comprehensive health services to 144 adolescents.

In addition to providing screening services and assessing acute and chronic health needs, the nursing staff focused on health promotion/disease prevention activities. Thirty classroom education sessions were conducted by the nursing staff and medical student. The following topics were included: self esteem, nutrition, AIDS, family planning, sexually transmitted diseases, smoking, and living with an alcoholic. In addition, dental education was provided to 105 students by a Minority Intern student from the University of Colorado.

Also, a risk assessment tool developed by the nurse practitioner three years ago was again used with the adolescent students. This year, it was completed by 102 students. The students were asked to respond to questions dealing with issues of relationships (friends, opposite sex, parents), substance use, stress, and career goals. After the student completed the questions, the nursing staff reviewed the questions with the students, assessing risk and making interventions as needed. Results of the risk assessment can be found in the appendix.

The mobile dental van was set up in Gilcrest this year to address the significant dental needs of these teenagers. A local Greeley dentist was hired on an hourly wage to staff the van Monday through Thursday during the time the school was in session. Three experienced hygienists (two full-time and one part time) were employed. They were able to meet the increased periodontal problems identified in this older school population. Some students were also bused to Salud Clinic in Fort Lupton. However, the majority could be treated at the school site. Services were increased through the use of an experienced dentist instead of dental students. Another minority intern from CU was utilized as the dental assistant which eliminated the need for translation.

In addition to the Gilcrest program, health services were provided during the evening adolescent program in Alamosa. Of disappointment was the inability to provide dental treatment to these adolescents due to lack of providers open in the evening.

An index assessing the periodontal status of adolescents in both sites was completed in 1992 as part of the screening. The results were encouraging: 5% had periodontal disease (9 students), which is much lower than anticipated. However, treatment for these students is still a difficult issue requiring further efforts in next year's planning.

PHYSICAL EXAMINATIONS

Plan de Salud del Valle, a Migrant/Community Health Center based in Ft. Lupton, graciously volunteered to have their medical providers conduct physical examinations on students in the Brighton, Ft. Lupton, and Longmont schools. These physical examinations were done at no cost to the migrant parents or to the Migrant Health/Migrant Education Program. A total of 240 students received these physical examinations.

MEDICAID

In order to stretch resources, in 1992 additional emphasis was placed on utilizing Medicaid as a payment source for health care. Migrant education recruiters were asked to explore Medicaid with families when they enroll them. If a child was born after Sept. 30, 1983 and is documented, the recruiters were asked to record either the child's Medicaid number or refer the family to Social Services to apply for Medicaid.

It is disappointing that by the end of the summer school program, only 149 children (7% of attending students) were enrolled in the Medicaid Program. (See Appendix for site specific enrollment.) As this will continue to be a critical resource for the provision of health services, exploration with Migrant Education staff will need to take place prior to the 1993 summer program to determine how to increase the number of children receiving Medicaid.

HEALTH RECORDS

In a few sites, health care was hindered by the lack of health records available on students. Health data entry forms and parent consent for summer health services were not made available to the summer health teams in a timely manner. In many cases this delayed health care. In one case, a child needing medical care received delayed health care because a parental consent form was not available.

The agreed upon policy between the Migrant Health and Migrant Education Program is that Health Data Entry Forms (Part I and Part II) and the Parent Consent form will be available to the Health Team no later than two days after the child begins attending the summer school program. Discussion will need to take place before next summer's program to problem solve this issue so that health care is not compromised.

SECTION II
HEALTH PROGRAM OVERVIEW

Service Population Profile

A total of 2,035 migrant children in migrant education schools received one or more services from the Colorado Migrant Health Program during the 1992 summer Migrant Education Program. (This is an increase from the 1,855 migrant education students who received services in 1991.) In addition to the migrant education students, children received services through daycare programs operating in conjunction with Migrant Education Schools in Fort Morgan and Alamosa. Figure I shows the number of migrant education students (daycare children not included) within the different age groups as well as the proportion of male to female students. Students ranged in age from three years old to 21 years old with the majority between the ages of five and 12. Of the 2,035 students, 52.3% were male and 47.7% were female.

Migrant student enrollees were predominately Hispanic (98.9%) with the remaining students being Anglo and Indian. Table I reflects the ethnic status.

FIGURE I

AGE AND SEX OF
MIGRANT EDUCATION ENROLLEES
-1992-

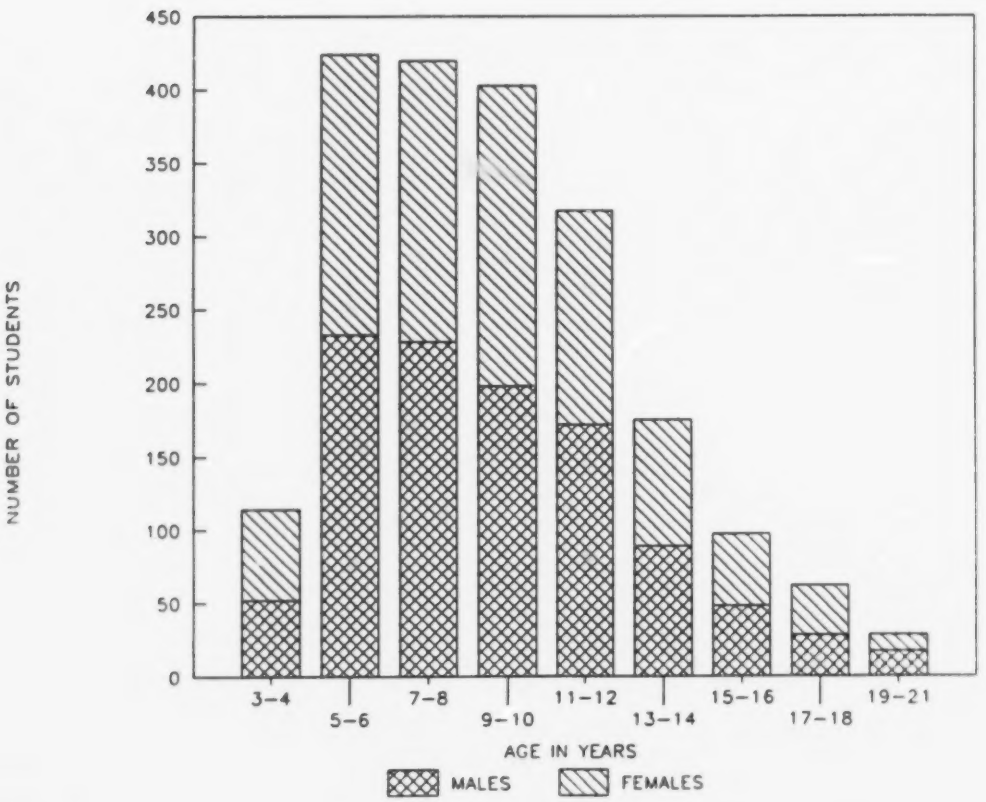


TABLE I

ETHNIC STATUS OF
MIGRANT EDUCATION ENROLLEES
-1992-

ETHNICITY	FREQUENCY	PERCENT
HISPANIC	2,013	98.9%
ANGLO	9	0.4
INDIAN	13	0.7
TOTAL	2,035	100 %

Service Providers

In order to provide a full continuum of health care, two categories of health providers are required: 1) nearly 200 local providers (physicians, dentists, pharmacists, allied health providers) either in private practice or working with community-based care organizations, and 2) seasonal-hire staff who are recruited nationwide for the duration of the Migrant Education summer schools. During 1992, 73 health providers were hired on this basis. This included:

- 19 Registered Nurses
- 14 Nursing Students
- 18 Dental Hygienists
- 17 Dental Students or Recent Dental School Graduates
- 3 Dental Managers
- 2 Licensed Dentists

These health providers worked as a multidisciplinary team and were deployed to 14 Migrant Education summer school sites. The placement of these providers is displayed in Table II. Also, migrant students attending the summer school program in Burlington received health services from the local county nursing service.

In addition to the health providers hired, there were other health providers who provided health care at no cost to the Migrant Education Program. A volunteer nurse practitioner provided health care services in Gilcrest. (This was the second year this nurse practitioner has volunteered her time.) Also in Gilcrest, a medical student worked through the American Medical Student Association. A health educator worked in the Delta site, and three nutrition interns worked at the Brighton, Ft. Lupton, and Longmont sites. Two students from C.U. worked with the program through the Minority Student Intern Program.

Also, 8 health aides were employed by local migrant education programs. Health aides worked either full or part time and mainly assisted the health teams with transportation.

Orientation is an important part of training health providers for the services they will provide. Summer health providers spent two and one half days of intensive training with the Migrant Health Program and approximately two days orientating to the local area (meeting migrant education staff and local health providers, finding out where migrants live and work, reviewing health records, etc.). This allows summer staff to begin providing high quality health care from the first day of the school program.

TABLE II

DEPLOYMENT OF SEASONAL HEALTH PROVIDERS
SUMMER MIGRANT EDUCATION SCHOOL
-1992-

Site	Nurses	Nursing Students	Dental Hygienists	Dental Students	Other
Fort Lupton	2	2.25	2	1.5	A,C
Brighton	1	1.25	1	1	C
Longmont	1	1	1	3	C
Fort Collins	1	1.25	0.5	1	
LaSalle	2	1	2	2	
Gilcrest	1	0	2.5	0.5	A,B,D,E
Fort Morgan	1.5	1	1	2	
Lamar	1	0	0.5	1	A
Rocky Ford	1.5	1	0.5	0	B
Pueblo	1	0	1	1	
Alamosa	2	2	2.5	1	
Olathe	1	1	1	1	F
Grand Junction	1	0	0	1	A
Commerce City	0.25	0	0.25	1	
Sealants			0.5		
TOTAL FULL-TIME EQUIVALENTS	17.25	11.75	16.25	17	

Numbers represent the full time equivalent of staff employed during the school term.

A = Dental Manager (1/2 time in Ft. Lupton, Gilcrest; full time in Grand Junction, Lamar)
B = Dentist (1/2 time in Gilcrest; full time in Rocky Ford)
C = Nutrition Intern (1/4 time)
D = Volunteer Nurse Practitioner (3/4 time)
E = Medical Student (full time)
F = Health Educator (full time)

Health Encounters

During the summer of 1992, 2,035 migrant education enrollees had a total of 13,221 encounters with health personnel from the Colorado Migrant Health Program. This represents an average of 6.5 encounters per student. It should be noted that the number of encounters increased from 1991 - there were 2,445 additional encounters in 1992 compared to 1991.

A health encounter is defined as a face-to-face interaction between a health provider and a student (or the student's parent) which requires independent judgment based upon the health provider's training and is of sufficient importance to be recorded in the patient's chart. Health care encounters are divided into the following categories:

1. New and repeat medical encounters
2. New and repeat dental encounters

"New" medical and dental encounters are those that happen during the first interaction with the student. "Repeat" encounters are those that happen subsequent to the initial (new) contact and are either follow-up to the condition identified during the initial contact or new health conditions which have arisen after the first contact.

The following table presents the number of encounters by service category:

TABLE III

NUMBER OF PATIENT ENCOUNTERS
-1992-

SERVICE CATEGORY	CATEGORY FREQUENCY	TOTAL	PERCENT OF TOTAL
MEDICAL		7,010	53.0 %
New	2,035		
Repeat	4,975		
DENTAL		6,211	47.0
New	1,951		
Repeat	4,260		
TOTAL	13,221	13,221	100 %

It is also of interest to note the sites at which these services were delivered to migrant children. The following table reflects this information:

TABLE IV

PATIENT ENCOUNTERS
BY SITE OF SERVICE
-1992-

SERVICE SITE	FREQUENCY	PERCENT
MIGRANT EDUCATION DAY SCHOOL	9,128	69.0 %
MIGRANT EDUCATION NIGHT SCHOOL	646	4.9
DENTAL OFFICE	2,387	18.1
MEDICAL OFFICE *	446	3.4
STUDENT'S HOMES	304	2.3
CMHP CLINIC	205	1.6
HOSPITAL	16	0.1
HEALTH DEPARTMENT	47	0.3
OTHER	42	0.3
TOTAL	13,221	100 %

* Includes offices of physicians, osteopaths, optometrists, opthalmologists, audiologists, etc.

As is evident from the preceding table, 73.9% of all encounters occurred at a school site. Offices of medical and dental practitioners were the next most frequent sites of services (21.4%) followed by services delivered in the home (2.3%).

It is of additional interest to examine where services were delivered by individual health practitioners. The following tables reflect the sites of service delivery by nursing and dental hygiene personnel:

TABLE V

NURSING* ENCOUNTERS BY
SERVICE DELIVERY SITES
-1992-

SERVICE SITE	FREQUENCY	PERCENT
MIGRANT EDUCATION DAY SCHOOL	5,242	87.6 %
MIGRANT EDUCATION NIGHT SCHOOL	385	6.4
HOME	236	3.9
CMHP CLINIC	40	0.7
OTHER**	82	1.4
TOTAL	5,985	100 %

NOTES: *Includes Migrant Education nurses, CMHP nurses, local nurses, nursing students and health aides.

**Includes physicians' offices, hospitals, and health departments.

TABLE VI

DENTAL HYGIENE ENCOUNTERS
BY SERVICE DELIVERY SITES
-1992-

SERVICE SITE	FREQUENCY	PERCENT
MIGRANT EDUCATION DAY SCHOOL	3,234	81.0 %
MIGRANT EDUCATION NIGHT SCHOOL	530	13.3
HOME	62	1.5
DENTAL OFFICE	168	4.2
TOTAL	3,994	100 %

NOTE: This table does not reflect the encounters by dentists and dental students.

SECTION III

HEALTH STATUS OF MIGRANT EDUCATION STUDENTS

Migrant children experience the same kinds of illnesses that are common to all children. However, it is generally observed that, for a variety of reasons, their overall health status is poorer than that of non-migrant children in Colorado and in the United States. Poverty, limited education, linguistic differences, and other factors interfere with access to both preventive health care (including immunizations, identification of impaired hearing, vision, or development, etc.) and health care for acute and chronic illnesses. As a result, a significant amount of preventable illness occurs, with dental disease being primary among these. Other disease states that are not promptly identified may be allowed to progress and become more serious or even develop irreversible complications. Crowded housing and poor sanitation conditions also contribute to an excess of communicable diseases, ranging from relatively benign respiratory infections to tuberculosis. In addition, injuries are common among older migrant children who work in the fields as well as among their younger siblings who may have no safe places in which to play.

In order to promptly identify the health problems found in these children, summer health teams review student health history information that is collected by migrant education recruiters. This history provides information about the student's health and will indicate if the parent has any concerns related to the child's health or development.

In addition, students are given routine evaluation in the following areas during the summer school program:

1. height and weight, in order to record and track growth as indicated
2. hematocrit, in order to identify anemia (as indicated)
3. audiometry, in order to identify abnormal hearing
4. vision testing
5. screening for scoliosis (for 11-year old children)
6. dental examination
7. PPD skin test for tuberculosis (as indicated)
8. immunization status to identify needed immunizations

In order to identify the presence of these conditions as soon as possible (so that intervention may be offered while the children are available for services), all health team members participate in screening clinics conducted during the first week that children attend migrant summer schools. Screening is offered thereafter on a weekly basis to identify health problems in students who begin attending at a later date. The following is a summary of the screening procedures offered:

Height and weight measurements are taken on all migrant school children. Height and weight values are recorded on the student's health data entry form. Should a student have a significant medical problem related to overweight, underweight or short stature, a growth chart will be plotted and a nursing and/or medical intervention will be made.

Hematocrits are done to assess the possibility of iron deficiency anemia. Any child whose home base is Mexico or who exhibits signs or symptoms of anemia is screened. Children are identified as being anemic if their hematocrit reading is below the indicated level:

Age		Hematocrit
6 mo.-2 years		< 33
3 - 4 years		< 34
5 - 9 years		< 35
10-14 years		< 36
15-18 years	male	< 39
	female	< 36
18 years +	male	< 42
	female	< 36

For those students identified as being anemic, the nurse makes a home visit to assess the child's medical history, discuss diet intervention, and give instructions for taking iron supplementation. Children with abnormal hematocrits are rescreened at intervals during the summer to assess whether or not the anemia has been resolved or improved.

Hearing screening is conducted on all testable students (some students may be too young to understand the screening instructions and are therefore untestable). A child must hear the tone in both ears at the following levels in order to pass the hearing screening:

4000 Hz at 25 dB
2000 Hz at 20 dB
1000 Hz at 20 dB
500 Hz at 25 dB

If a child fails the hearing screening, he is rescreened on another day unless there is evidence to suggest the presence of otitis media. (If there is such evidence, the nurse will immediately refer the child to a physician and rescreen the child's hearing after resolution of the infection.) Children who fail screening twice are referred to a local audiologist for further diagnostic evaluation.

Vision screening is done on all testable children. Children are screened using the following tests: Distance Visual Acuity (to detect nearsightedness, amblyopia, and astigmatism), Plus Lens Test (to detect excessive farsightedness), Near Point of Convergance (to detect convergence insufficiency), Alternate Cover Test (to detect strabismus and heterophoria), and Stereo/Depth Perception (to detect amblyopia and poor ocular alignment).

If a child fails one or more of the vision screening tests, he is retested another day. If he fails a second time, a referral to an optometrist or opthalmologist is made. Migrant education nurses arrange for referrals and follow up for active migrant students. Local migrant education staff arrange for referrals and follow up for settled out or seasonal migrant students.

Scoliosis screening is done on all 11 year old children by the Migrant Education Nurse. This screening procedure is done to detect any lateral curvature of the spine which, if present, may worsen during the adolescent growth spurt. Abnormals are rescreened, and, if still abnormal, are referred to a medical provider for evaluation and possible x-ray. If there is need for immediate intervention, the child is referred to the Handicapped Children's Program.

Dental screening consists of an examination of the teeth and oral structures. The purpose of this screening is to identify those children in need of professional dental treatment.

Dental screening is done by the dental hygienist or as a cooperative effort with the dental student or resident. At the time of screening, the children are prioritized according to the severity of need. Children with the most serious treatment needs are referred first for care, with less serious conditions being referred as time and financial resources allow. Because dental problems are related in part to poor nutrition and oral hygiene practices, the need for home visits for parental counseling concerning rampant or excessive caries as well as bottle mouth caries is also determined.

Teeth that meet the criteria for dental sealants are also identified on each child. A program priority is to seal teeth to prevent dental caries in future years.

PPD (Purified Protein Derivative) testing is a skin test which determines exposure to the tuberculosis (TB) bacillus. This screening procedure is arranged by or performed by the Migrant Education Nurse on students who are children of "active" migrant farmworkers (migrant status 1 or 2) who have not had a TB skin test in the past two years. The skin test is read 48 to 72 hours later. Children with positive tests are referred to local health departments or county nurses for chest x-rays and other follow up. This procedure requries signed parental consent.

Immunization status is assessed by the migrant education nurse for all students who did not attend school in Colorado during the regular school year. (Students who attended Colorado schools during the regular school year will have had their immunization records assessed by the school nurse.) For those students determined to need immunizations, the migrant education nurse obtains informed written consent from the parents. Immunizations are either given to the student at the summer migrant education school or the students are taken to the local public health department or nursing service to obtain the needed immunizations.

The following table reflects the "abnormal" findings identified through the screening process in 1992:

TABLE VII

MIGRANT EDUCATION
SCREENING OUTCOMES
-1992-

SCREENING PROCEDURE	NUMBER SCREENED	NUMBER ABNORMALS	PERCENT ABNORMAL
HEMATOCRIT	268	4	1.5 %
HEARING	2,035	70	3.4
SCOLIOSIS	293	12	4.1
VISION	1,959	263	13.4
TB SKIN TESTS	685	33	4.8
DENTAL	1,951	1,123	57.5

Note: A site specific summary of screening outcomes and follow-up is included in the appendix.

Once students are screened, dental hygienists provide case management to assure students receive dental treatment. In addition, hygienists provide sealants, cleanings and fluoride application.

Nurses provide referrals and case management for students with abnormal screening results. In addition, nurses provide day-to-day nursing care and case management for acute and chronic health problems.

Diagnostic Data

For all significant encounters between health care providers and migrant education students, diagnostic information is recorded, coded, and tabulated so that the incidence of illness episodes experienced by these children during the six to seven weeks of the summer school program can be analyzed. This diagnostic data provides important information regarding the health status and health needs of this population.

Table VIII shows the total incidence during the 1992 Migrant Education summer school program of illness episodes in terms of diagnostic categories. (These figures represent new illnesses only, not the total number of encounters for illnesses).

TABLE VIII
MIGRANT EDUCATION
DIAGNOSTIC FREQUENCIES
"NEW ILLNESSES"
1992

DENTAL	
Caries	1,123
TOTAL	1,123
DISEASES OF THE EYE, EAR, NOSE, AND THROAT	
Abnormal Vision	263
Otitis Media	82
Hearing Loss	70
Conjunctivitis	44
Nosebleed	26
Cerumen (wax)	16
Allergies/Hayfever	6
Serous Otitis	6
Other EENT	118
TOTAL	631
INJURIES	
Abrasion/Bruise	183
Sprain/Strain	65
Laceration/Puncture	62
Insect/Animal Bite	16
Burn	11
Fracture	9
Oral Trauma	8
Other Injuries	91
TOTAL	445
DISEASES OF THE SKIN	
Infection/Cellulitis	23
Contact Dermatitis	14
Eczema	9
Hives	6
Impetigo	4
Other (warts, rashes, etc.)	175
TOTAL	231
COMMUNICABLE DISEASES	
Pediculosis (head lice)	38
URI/Cough/Sore Throat	37
Tuberculosis/Positive PPD	33
Other Viral Syndromes	31
Strept Throat	18
Scabies	9
Hepatitis	3
Other Communicable Disease	8
TOTAL	177

GASTROINTESTINAL DISORDERS	
Abdominal Pain	78
Diarrhea/Vomiting	23
Ulcer/Gastritis	9
Other Digestive	31
TOTAL	141
NEUROLOGIC	
Headache	96
Epilepsy/Seizure	6
Dizziness/Fainting	6
TOTAL	108
GENITOURINARY/GYNECOLOGIC	
Urinary Tract Infection	20
Menstrual Problem	9
Pregnancy	7
Vaginitis	2
Other GU/GYN	15
TOTAL	46
NUTRITION RELATED	
Anemia	4
Obesity	2
Underweight	2
TOTAL	8
OTHER	
Other Heart/Blood	18
Scoliosis	12
Heart Murmur	12
Chest Pain	11
Fever	10
Fatigue/Malaise	9
Arthritis/Joint Pain	7
Psycho-Social Problems	6
Abnormal Development	4
Asthma	4
Low Back Pain	3
Depression	2
Enlarged Lymph Glands	2
Birth Defect	1
Child Abuse	1
History of Rheumatic Fever	1
Other	58
TOTAL	161

Table IX summarizes the incidence of illness episodes for each broad diagnostic category, and Figure II displays the information graphically in terms of incidence of new illnesses in each diagnostic category per 100 students who received health screening. This means that during the 1992 summer program, for every 100 students, there were 55 who had dental caries, 31 with disease episodes of the eyes, ear, nose, and throat (including hearing or vision problems), 22 with injuries, etc. It should be noted that these incidence rates provide an under-representation of the actual incidence of illnesses for a number of reasons. For example, many children were not present in the area during the entire summer and had undocumented health problems during this time. Illnesses which occurred over the weekend or which prevented children from attending school may have been missed. When illnesses or abnormalities were found upon screening, screening codes were sometimes used instead of diagnostic codes for these illnesses. Similarly, coded documentation of diagnoses may have been incomplete for children with several simultaneous health problems.

Figure II also compares graphically the differences in illness episodes between the 1991 and 1992 summer programs. Note that in 1992, there was an increased incidence of illness in all categories except dental and nutrition problems.

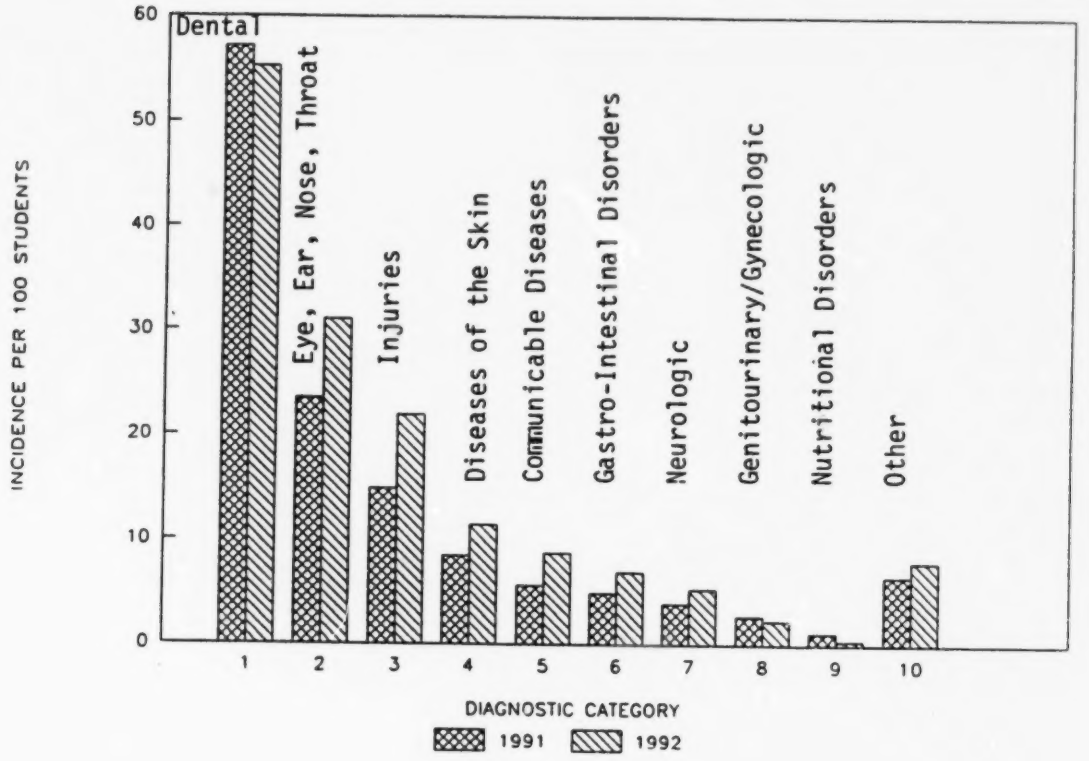
TABLE IX

NEW ILLNESS BY
DIAGNOSTIC CATEGORY
-1992-

Diagnostic Categories	Rank	Incidence	Incidence/100 Students
Dental Caries	1	1,123	55.2
Eye, Ear, Nose, and Throat	2	631	31.0
Injuries	3	445	21.9
Diseases of the Skin	4	231	11.4
Communicable Diseases	5	177	8.7
Gastro-Intestinal Disorders	6	141	6.9
Neurologic	7	108	5.3
Genitourinary/Gynecologic	8	46	2.3
Nutritional Disorders	9	8	0.4
Other	10	161	7.9

FIGURE II

INCIDENCE OF NEW ILLNESS
PER 100 STUDENTS
1991 and 1992



In order to evaluate the health status of Migrant Education children served in Colorado in 1992, analysis of this diagnostic information should be compared with similar information obtained from other school-age populations. Unfortunately, there is limited data available from other populations that is truly comparable. The best comparable data has been obtained from school health screening of children in Colorado during 1991-92 and includes results of vision and hearing screening. The criteria used by other Colorado school programs to define "abnormal" values is identical to criteria used by the CMHP. Compared with Colorado school children, 1992 Migrant Education students were found to have a higher incidence of abnormal vision and hearing.

As is readily apparent from Table IX and Figure II, dental disease is the major health problem for migrant children with 1,123 students (57.5%) having identifiable dental problems. Of these, 50 students (2%) were identified as requiring immediate referral for relief of pain and/or treatment of dental infection.

The following statements may be offered:

- 65% of students with identified dental problems received complete treatment;

- 9% of students with identified dental problems received partial treatment;

- there were a total of 2,217 visits to dental offices, an average of 2.6 visits per child receiving treatment;

- The rest of the students with identified dental problems were not referred due to one of the following reasons: low priority of need, the student had their own dentist, had poor attendance, moved before dental treatment could be initiated, or because a parent did not sign a consent form (especially Rocky Ford). (Students moving or lack of time was the major reason why students were not referred.)

In addition to treatment offered for acute and chronic dental problems, substantial emphasis was placed on preventive dental services. During the 1992 summer school session, a total of 1,680 students received dental prophylaxis and fluoride application treatments. This represents 87% of the children receiving dental screenings. Portable dental equipment made it possible for the dental hygienist to provide the majority of this treatment within the school setting as well as enhancing the placement of dental sealants.

Dental pit and fissure sealants were provided again this year. One hygienist was hired to travel the northern part of the state with specialized equipment to place sealants. In the southern part of the state, sealants were placed by individual hygienists either at the school or in the dental offices.

Sealants are a clear or tinted resin material that is placed on the chewing surfaces of teeth. The material flows into the deep pits and fissures and hardens to prevent decay in these surfaces.

Sealant statistics from the past years are as follows:

TABLE X
PLACEMENT OF DENTAL SEALANTS
1990 - 1992

	1990	1991	1992
# Children Receiving Sealants	645	828	774
# Sealants Placed	2,802	3,583	3,655

Indeed, the dental sealant program has been a success. Properly apliced, dental sealants should last at least five years, if not the lifetime of the tooth. Retention rate in the program over the years has averaged 88-92%. There wil always be aneed for an aggressive dental sealant program because of new children entering the system each year and the erruption of additional teeth in those returning to the program.

SECTION
IV

HEALTH EDUCATION

In order to enhance the general health status of the migrant farmworker population it is necessary to place a high priority on teaching and assisting migrant children to develop healthful lifestyles and health practices.

In 1992, emphasis was again placed on integrating health education into classroom activities.

Health Education Curriculum

The Migrant Summer School Health Education Curriculum (MSS-HEC) was again available in all summer school programs. This curriculum provides health education units on selected topics: dental health, nutrition, safety education, personal hygiene, wellness, and sex education.

The units were developed for Level I (lower elementary), Level II (upper elementary), and Level III (grades 6-8). Each topic area and level have two to four classroom lessons developed around specific, measurable learning objectives. Each lesson contains:

1. A concept sheet for the teacher with basic background information on the subject matter.

2. Learning objectives and related bilingual activities.

3. Supplemental materials which include hand-out pamphlets, student worksheets, and related activities in other classes.

4. Evaluation instruments.

The MSS-HEC units were primarily utilized by Migrant Health summer staff although some teachers used the units as well.

Health Education Activities by Summer Health Staff

All summer health team members were given the responsibility of engaging in health education and promotion activities. These activities involved participation in classroom education, discussion groups, staff inservice training, and presentations at family nights. Table XI shows the number of health education/promotion activities offered in the classroom, at staff inservices, and at family nights. Tables XXVIII and XXIX in the appendix detail health education services provided by nurses and dental hygienists in each site.

TABLE XI

HEALTH EDUCATION/PROMOTION
ACTIVITIES
-1992-

CATEGORY	GROUP/CLASS-ROOM SESSIONS	# PERSONS ATTENDING	STAFF IN-SERVICES	# PERSONS ATTENDING	FAMILY NIGHT PRESENTATIONS	# PERSONS ATTENDING
Nursing	205	3,408	25	151	18	1,033
Dental	68	1,353	1	26	4	401
TOTALS	273	4,761	26	177	22	1,434

The number of health education sessions increased from 1991, especially in the area of classroom education. An additional 51 health education sessions were held in 1992 compared to 1991.

Classroom education and group sessions included the topics contained in the MSS-HEC curriculum (dental health, nutrition, safety education, personal hygiene, wellness, and sex education). In addition, other health education topics addressed were: health screening instruction, handwashing, lice, sex education, health careers, fire safety/burn prevention, menstruation, self esteem, heart health, safety at home, outdoor safety, AIDS, sexually transmitted diseases, smoking/drug prevention, living with an alcoholic parent, playground safety, family communication, and pesticide poisoning prevention. Methods of instruction included lecture, audiovisuals, puppet shows, guest speakers (eg. fire department), and health games.

Family night presentation topics included dental care, family planning, high blood pressure, tuberculosis, how to take a temperature, nutrition, and pesticide exposure prevention. The topics were presented in the form of group presentations, skits, puppet shows, visual displays, handouts, and one on one counseling.

Staff inservice topics included information on summer health services and screening, tuberculosis and PPD testing, health education methods, and hepatitis A.

In 1992, a Minority Intern from the University of Colorado was utilized as a dental health educator. While not being a dental professional, he was bicultural/bilingual and greatly enhanced the dental education component, allowing the dental hygienists more time to provide preventive services.

SECTION
V

FINANCIAL RESOURCES

In order to deploy a comprehensive health program for the 2,035 students enrolled in the 15 Migrant Education summer schools, it was necessary to carefully coordinate a variety of financial resources. The following table reflects the financial requirements and sources of revenue for the Migrant Education Health Program.

TABLE XII

FINANCIAL REQUIREMENTS AND
SOURCES OF REVENUE
MIGRANT EDUCATION
HEALTH PROGRAM
-1992-

	Total Revenue Required	Sources of Revenue			
		Colorado Migrant Health Program	Maternal Child Health Grant	*Other	Colo. Dept. of Educ.
Personnel	$197,398	$60,194	$30,356	$ 39,092	$ 67,756
Travel	6,102	3,818	0	0	2,284
Operating (recruitment, printing, key punch, etc.)	7,800	7,800	0	0	0
Orientation	9,200	6,200	0	0	3,000
Supplies	10,961	9,961	0	0	1,000
Treatment	229,514	47,007	1,034	150,847	30,626
Total Direct Costs	460,975	134,980	31,390	189,939	104,666
Indirect Costs	29,231	18,897	0	0	10,334
GRAND TOTAL	$490,206	$153,877	$31,390	$189,939	$115,000
	(100%)	(31.4%)	(6.4%)	(38.7%)	(23.5%)

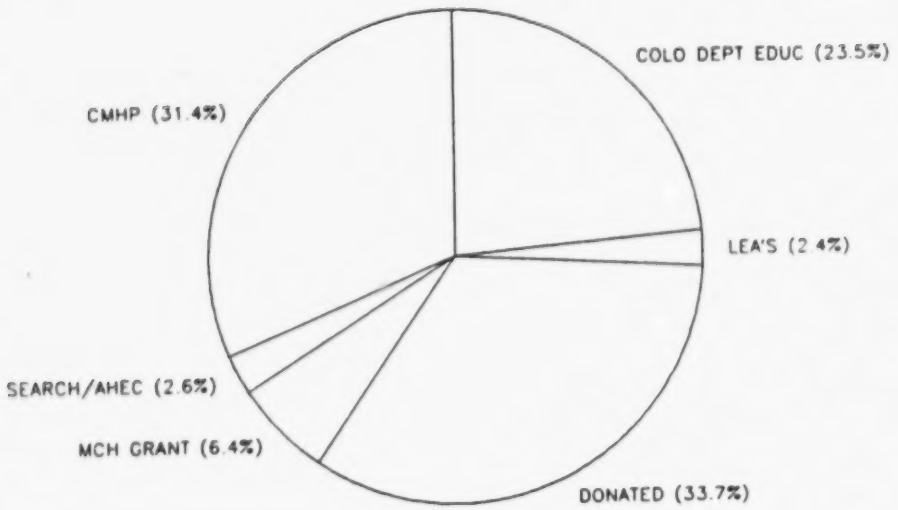
*Other sources include:

1.	SEARCH/AHEC	$ 13,000
2.	Donated Discounted Services	159,838
3.	LEA Contribution	12,000
4.	Parent Copay - Glasses	701
5.	Minority Student Program	4,400
	Total	$ 189,939

The percentage of funds received from all the revenue sources is depicted graphically in the following figure:

FIGURE III

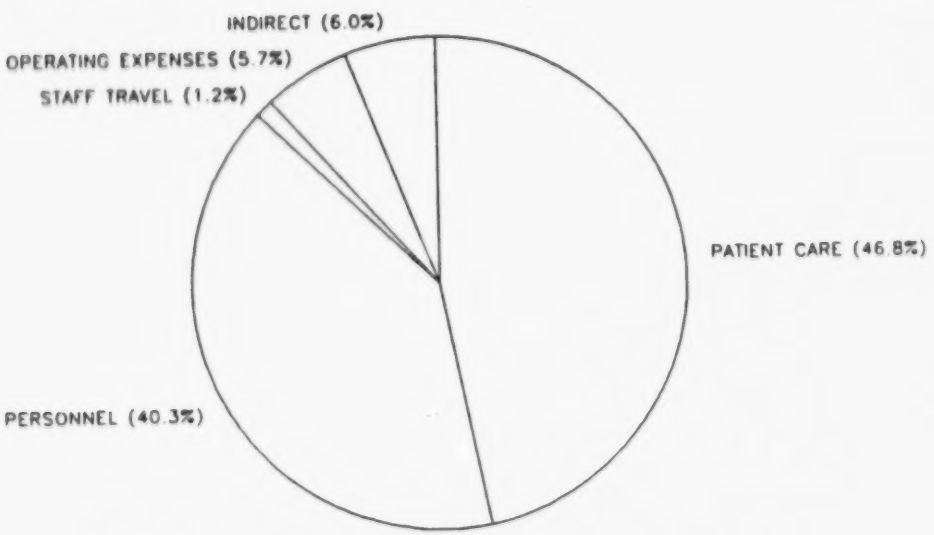
SOURCES OF REVENUE
MIGRANT EDUCATION HEALTH PROGRAM
-1992-



Allocation of all resources is depicted in the following figure:

FIGURE IV

ALLOCATION OF RESOURCES
MIGRANT EDUCATION HEALTH PROGRAM
-1992-



The specific contribution of the Migrant Education Program to the 1992 program effort is displayed in Table XIII and is depicted graphically in Figure V.

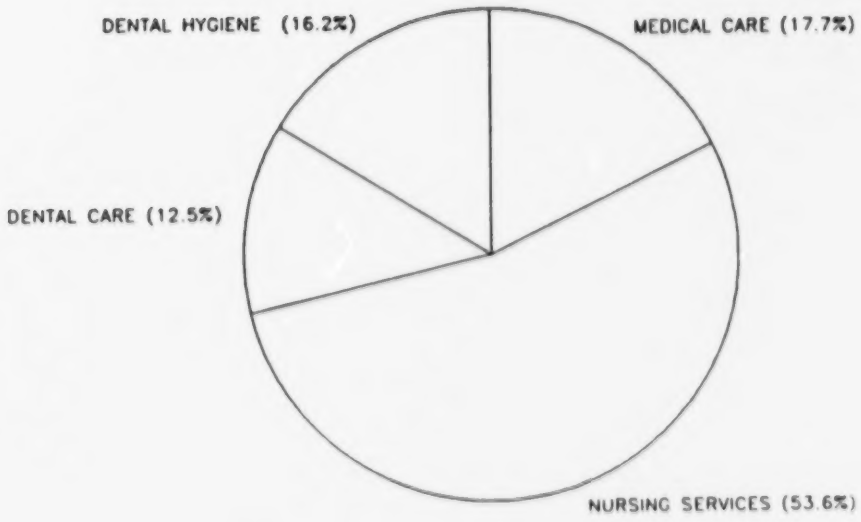
TABLE XIII

MIGRANT EDUCATION CONTRIBUTION
ALLOCATION BY SERVICE CATEGORY
- 1992 -

COST CATEGORY	AMOUNT ALLOCATED	PERCENT OF MIGRANT EDUCATION BUDGET
Medical Care	$ 20,334	17.7 %
Nursing Services	61,679	53.6
Dental Care	14,413	12.5
Dental Hygiene Services	18,574	16.2
TOTAL	$ 115,000	100 %

FIGURE V

MIGRANT EDUCATION
BUDGET ALLOCATION
BY SERVICE CATEGORY
-1992-



NOTES:

"Medical Care" includes reimbursement to local physicians, clinics, laboratories and others for medical treatment and services. It also includes medications and associated indirect costs.

"Nursing Services" includes nursing salaries, nursing students' stipends, 1/2 of the health education supply costs, nursing/medical supplies, nurses' travel, and associated indirect costs.

"Dental Care" includes dental treatment, dental students' stipends, and associated indirect costs.

"Dental Hygiene Services" includes dental hygienists' salaries, 1/2 of the health education supply costs, dental supplies, dental hygienists' travel, and associated indirect costs.

It is significant to note that although services were offered to Migrant Education Students at a cost to the Department of Education of $115,000, the total value of services offered far exceeded this amount. This is due to contributions from other sources of revenue and the cost-effective mechanisms which have been developed over the past several years. For example, major savings are gained in the Medical Cost category from the following sources:

- Several private physicians and local medical practices offer reduced rates for migrant children enrolled in the Migrant Education Program;

- Plan de Salud del Valle, Sunrise Community Health Center, and Valley Wide Health Services offer medical services to migrant students at minimal cost per patient visit. In addition, providers from Plan de Salud and Valley Wide made routine visits to the schools to provide medical services on site;

- Local pharmacists have agreed to offer services in accordance with MAC (maximum allowable costs) guidelines;

- Local health departments offer a multitude of services at minimal or no cost (e.g. immunizations).

In addition, the dental component offers a number of tangible examples of cost-effectiveness:

- When dental services are provided by a dental student under the direct supervision of local dentists, the cost to the program is only 1/3 to 1/2 the usual and customary charge;

- Both Plan de Salud del Valle and Sunrise Community Health Center provide comprehensive dental services to migrant students in Adams, Weld and Boulder Counties in return for minimal payments.

- Dental prophylaxis, topical fluoride applications, and individual students oral hygiene instruction are provided by dental hygienists in the migrant school with portable equipment. A total of 1,680 students received cleaning and fluoride services in 1992 (87% of all children screened). These services cost approximately $30.00 per patient in the private sector for a total cost of $50,400. The total cost to the Colorado Department of Education for dental hygienists in 1992 was $11,971, a cost savings of $38,420.

Table XIV shows the actual value of dental treatment provided in dental office and the actual amount paid for the treatment. It does not include services provided by the dental hygienists in the schools and associated costs.

TABLE XIV

DENTAL TREATMENT COSTS
VALUE OF TREATMENT, EXPENDITURE BY SOURCE

1992

SITE	ACTUAL VALUE OF TREATMENT PROVIDED	ACTUAL AMOUNT PAID FOR TREATMENT	AMOUNT PAID BY MIGRANT EDUC. FUNDS	AMOUNT PAID BY CMHP OR MCH FUNDS
Alamosa	$14,011	$10,613	$2,702	$7,911
Brighton	21,750	1,000	0	1,000
Burlington	2,763	2,590	0	2,590
Commerce City	9,515	300	0	300
Fort Collins	5,314	3,155	0	3,155
Fort Lupton	30,018	1,800	0	1,800
Fort Morgan	11,884	5,970	2,134	3,836
Gilcrest	10,194	2,110	1,440	670
Grand Junction	7,601	4,294	96	4,198
Lamar	7,997	4,677	461	4,216
LaSalle	13,513	3,199	0	3,199
Longmont	35,944	4,502	3,736	766
Olathe	9,364	6,303	0	6,303
Pueblo	8,957	4,680	147	4,533
Rocky Ford	7,730	2,647	1,613	1,034
TOTAL	$196,555	$57,840	$12,329	$45,511

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SECTION VI

PREPARING FOR 1993

Program year 1993 will present a set of major challenges and opportunities to Colorado's Migrant Health/Migrant Education partnership.

Declining financial resources in the face of constant need, coupled with inflation, will dominate attention from both the Migrant Education and Migrant Health Programs. However, the strength of the collaborative relationship that exists between these two essential programs will help to maximize resources and minimize the effect of decreased funding.

In order for strategic planning to take place, it will be essential that migrant health personnel and migrant education personnel relook at their mission, goals, and objectives for meeting the health and educational needs of migrant students. Input from state migrant education consultants, local migrant education directors, recruiters, and records clerks, will assist migrant health personnel in planning health interventions for migrant students.

Targeted areas to be addressed in planning for the 1993 summer program include the following:

Medicaid Utilization

As discussed in the "Highlights" section at the beginning of this report, it was disappointing that only 7% of the students enrolled in the summer migrant education program were enrolled in Medicaid. Utilizing Medicaid as a resource will decrease the Migrant Education/Migrant Health money needing to be spent on health care problems. Migrant education recruiters play a critical roll in referring families to the Medicaid program and providing follow up to assure that the families have enrolled. Ways to increase the number of children enrolled will need to be discussed prior to the 1993 program.

Health Records

In order to provide health care services in a very short amount of time (6-7 weeks), it is crucial that health history information and parent consent for health services be available on all students. The Migrant Education and Migrant Health Programs have agreed in the past that health records and parental consents need to be available to the summer health team within 48 hours after the child begins attending the summer school program. In several sites during the 1992 program, health records were not available on students until several days to a couple of weeks after they began attending the program. This delayed care for several students as they could not be referred for care until parental consent was obtained. In addition, not having health histories compromised medical care as information needing to treat children was lacking. For example, a child could not be referred into a physician for a possible ear infection without knowing if the child is allergic to any medication.

Health Aides

Health aides play a vital role in the delivery of health services during the summer migrant education program. They assist with screening, provide transportation, provide translation (both at the school and on home visits), assist with record keeping, and assist with other dental and nursing procedures.

Health services are significantly impaired when there are not health aides to provide these services. Nursing and dental hygiene personnel are not appropriately used if they must spend significant time transporting, trying to find a translator, doing a lot of paperwork, etc. Over the years, decreased funding levels has meant a reduction in the number of health aides available in many local summer migrant schools. Indeed in 1992, many migrant education directors shifted some health aide responsibilities to recruiters and records clerks. However, recruiters and records clerks have other important responsibilities that require their attention, and therefore are not always available to the health team.

Prior to the 1993 summer program, discussion and negotiation will need to take place between the Migrant Health and Migrant Education Program to determine the most cost effective means of assuring that adequate support to the health team is achieved.

Hematocrit Screening for Anemia

Because the incidence of low hematocrits has decreased substantially (1.5% in 1992), exploration will take place to determine if this screening should continue.

Vision Screening

Because expanded vision screening was conducted in 1992, there was a higher incidence of students who had an abnormal vision screen and more students were referred. However, there were a large number of students referred to an optomotrist or ophthalmologist who were found to need no intervention. Evaluation of the vision screening tests will take place to attempt to decrease the number of apparent overreferrals for abnormal vision screening.

APPENDIX

COMPARATIVE STATISTICS BY SCHOOL SITE -1992-

The following section is composed of various tables which outline by school site the incidence and follow-up of specific medical and dental problems. These tables are presented to provide supporting data for the summary statistics which appear in the body of this report. This information may also be utilized in planning efforts directed toward maintaining and enhancing current efforts.

Examination of the tables reveals variations from site to site. A number of factors can contribute to these variations, for example, the enrollment of a large number of active versus recent settling-out farmworkers may increase the incidence of health related problems since the children may not receive ongoing care.

TABLE XV

TUBERCULOSIS TESTING (PPD) - RESULTS/FOLLOW-UP

1992

SITE	# SCREENED	ABNORMALS IDENTIFIED		ABNORMALS FOLLOWED-UP*	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Alamosa Day School	121	9	7.9	9	100
Alamosa Night School	10	0	0	NA	NA
Brighton	38	0	0	NA	NA
Burlington	22	2	9	2	100
Commerce City	2	0	0	NA	NA
Fort Collins	22	1	4.5	1	100
Fort Lupton	80	1	1.3	1	100
Fort Morgan	87	2	2.2	2	100
Gilcrest	21	2	9.5	2	100
Grand Junction	25	1	3.5	1	100
Lamar	34	0	0	NA	NA
LaSalle	72	5	6.9	5	100
Longmont	30	0	0	NA	NA
Olathe	80	6	7.5	6	100
Pueblo	6	3	50.0	3	100
Rocky Ford	32	1	1	3.1	100
TOTAL	685	33	4.8%	33	100%

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TABLE XVI

IMMUNIZATIONS

1992

SITE	IMMUNIZATION STATUS ASSESSED	# CHILDREN COMPLETE OR PROV. COMPLETE	# CHILDREN IMMUNIZED	TOTAL # OF IMMUNIZATIONS GIVEN	# CHILDREN WITH UNAVAILABLE RECORDS	# CHILDREN NEEDING IMMUNIZATIONS BUT DID NOT RECEIVE*
Alamosa Day School	281	276	14	1	25	0
Alamosa Night School	48	40	1	1	0	7
Brighton	153	132	6	6	18	14
Burlington	57	39	18	49	3	0
Commerce City	0	N/A	N/A	0	N/A	N/A
Fort Collins	45	33	8	16	6	4
Fort Lupton	260	228	18	32	10	4
Fort Morgan	109	77	28	48	4	4
Gilcrest	107	97	2	4	8	8
Grand Junction	49	24	7	17	10	18
Lamar	68	52	15	40	13	1
LaSalle	226	50	32	73	8	2
Longmont	147	119	14	23	16	13
Olathe	117	72	37	95	20	8
Pueblo	7	61	17	17	0	0
Rocky Ford	72	36	19	36	13	17
TOTAL	1,816	1,336	236	458	154	86

*Consent form not signed, child moved or left school

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TABLE XVII

VISION PROBLEMS - INCIDENCE/FOLLOW-UP

1992

SITE	# SCREENED	ABNORMALS IDENTIFIED		ABNORMALS FOLLOWED-UP*	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Alamosa Day School	274	36	13.1	36	100
Alamosa Night School	48	4	8.3	4	100
Brighton	153	22	14.3	22	100
Burlington	35	2	5.7	2	100
Commerce City	38	9	23.7	8	88.9
Fort Collins	50	8	19.0	7	87.5
Fort Lupton	257	18	7.0	18	100
Fort Morgan	113	25	22.0	25	100
Gilcrest	144	39	27.0	39	100
Grand Junction	49	7	14.3	3	42.9
Lamar	116	18	15.5	13	72.2
LaSalle	226	22	9.7	22	100
Longmont	147	8	5.4	8	100
Olathe	112	9	8.0	8	88.8
Pueblo	78	7	8.9	7	100
Rocky Ford	119	29	24.4	29	100
TOTAL	1,959	263	13.4%	251	95.4%

*Outcomes of follow-up for abnormals. (This is the follow-up done by the migrant education nurse. Migrant education staff provided needed follow-up for 47 status 3 students.

- Received new glasses: 136 students
- Broken glass frames repaired: 7 students
- Referred to optometrist/opthalmologist, but didn't need glasses: 93 students
- Refused to wear glasses (including those who already had glasses): 3 students
- Currently undergoing treatment for eye disorder/problem: 7 students
- Referred to Handicapped Children's Program: 4 students
- Referred to Children's hospital for Wilsons's Disease and eye surgery: 1 student

Abnormals by Vision Screening Test:

- Distance: 163
- Near Point: 33
- Plus Lens: 15
- Stereo Depth: 35
- Alternate Cover: 17

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TABLE XVIII

HEARING PROBLEMS - INCIDENCE/FOLLOW-UP

1992

SITE	# SCREENED	ABNORMALS IDENTIFIED		ABNORMALS FOLLOWED-UP*	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Alamosa Day School	274	8	2.9	7	87.5
Alamosa Night School	48	1	2.0	1	100
Brighton	145	3	2.0	3	100
Burlington	35	2	5.7	2	100
Commerce City	38	1	2.6	1	100
Fort Collins	50	1	2.3	1	100
Fort Lupton	260	1	0.3	1	100
Fort Morgan	113	4	3.5	4	100
Gilcrest	25	5	20.0	5	100
Grand Junction	49	7	14.3	5	71.4
Lamar	116	7	6.0	6	85.7
LaSalle	226	17	7.5	13	76.5
Longmont	147	1	0.6	1	100
Olathe	112	2	1.7	2	100
Pueblo	78	1	1.2	1	100
Rocky Ford	119	9	7.5	9	100
TOTAL	2,035	70	3.4%	62	88.6%

*Outcomes of follow-up for abnormal hearing:

- Wax - 4
- Surgery required - 7
- Otitis Media - 12
- Referral to audiologist - 35
- Hearing loss already being treated - 13

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TABLE XIX

SCOLIOSIS - INCIDENCE/FOLLOW-UP

1992

SITE	# SCREENED	ABNORMALS IDENTIFIED		ABNORMALS FOLLOWED-UP*	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Alamosa Day School	12	0	0	NA	NA
Alamosa Night School	0	0	0	NA	NA
Brighton	11	0	0	NA	NA
Burlington	18	0	0	NA	NA
Commerce City	2	0	0	NA	NA
Fort Collins	14	2	14.3	2	100
Fort Lupton	70	3	4.3	3	100
Fort Morgan	36	1	2.7	1	100
Gilcrest	28	0	0	NA	NA
Grand Junction	3	0	0	NA	NA
Lamar	9	0	NA	NA	NA
LaSalle	47	4	8.5	4	100
Longmont	10	0	0	NA	NA
Olathe	11	0	0	NA	NA
Pueblo	6	2	33.3	2	100
Rocky Ford	16	0	NA	NA	NA
TOTAL	293	12	4.1%	12	100%

* Outcomes of follow-up for abnormals:

- True Scoliosis identified and treatment initiated - 4
- Referred, Scoliosis not diagnosed - 8

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TABLE XX

HEMATOCRIT TESTING FOR ANEMIA

1992

SITE	# SCREENED	ANEMIA IDENTIFIED		# RECEIVING IRON SUPPLEMENT		# WHOSE HEMATOCRIT IMPROVED	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Alamosa Day School	21	0	0	0	NA	NA	NA
Alamosa Night School	1	0	0	0	NA	NA	NA
Brighton	2	0	0	0	NA	NA	NA
Burlington	13	0	0	NA	NA	NA	NA
Commerce City	15	0	0	NA	NA	NA	NA
Fort Collins	12	0	0	0	NA	NA	NA
Fort Lupton	10	0	0	0	NA	NA	NA
Fort Morgan	13	0	0	0	NA	NA	NA
Gilcrest	29	0	0	0	NA	NA	NA
Grand Junction	5	1	20.0	1	100	1	100
Lamar	23	0	0	0	NA	NA	NA
LaSalle	74	1	1.3	1	100	1	100
Longmont	31	0	0	0	NA	NA	NA
Olathe	95	0	0	0	NA	NA	NA
Pueblo	10	1	10.0	1	100	1	100
Rocky Ford	13	1	7.6	1	100	1	100
TOTAL	268	4	1.5%	4	100%	4	100%

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TABLE XXI

DENTAL PROBLEMS - INCIDENCE/FOLLOW-UP

1992

SITE	# SCREENED	ABNORMALS IDENTIFIED		ABNORMALS FOLLOWED-UP/ TREATMENT PROVIDED	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Alamosa Day School	277	129	47	89	69
Alamosa Night School	55	27	49	3	11
Brighton	154	76	49	65	86
Burlington	12	12	100	12	100
Commerce City	50	27	54	26	96
Fort Collins	52	30	58	26	87
Fort Lupton	271	158	58	90	57
Fort Morgan	111	80	72	56	70
Gilcrest	145	93	64	57	61
Grand Junction	48	31	65	31	100
Lamar	96	42	44	28	---
LaSalle	225	138	61	101	73
Longmont	141	130	92	123	95
Olathe	116	57	49	51	89
Pueblo	79	35	44	31	89
Rocky Ford	119	58	49	47	81
TOTAL	1,951	1,123	57%	836	74

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TABLE XXII

DESCRIPTION OF DENTAL FOLLOW-UP NEEDED

1992

SITE	# SCREENED	NEED ROUTINE DENTAL CARE		NEED EMERGENCY DENTAL CARE	
		NUMBER	PERCENTAGE	NUMBER	PERCENTAGE
Brighton	154	73	47	3	2
Commerce City	50	27	54	0	0
Fort Lupton	271	149	55	9	3
LaSalle	225	130	58	8	4
Gilcrest	145	87	60	6	4
Longmont	141	122	87	8	6
Fort Collins	52	30	58	0	0
Fort Morgan	111	80	72	0	0
Lamar	96	41	43	1	1
Rocky Ford	119	57	48	1	1
Pueblo	79	35	44	0	0
Alamosa Day School	277	119	43	10	4
Alamosa Night School	55	24	44	3	5
Grand Junction	48	31	65	0	0
Olathe	116	56	48	1	1
TOTAL	1,939	1,061	55%	50	2%

NOTE: In addition, twelve (12) children enrolled in the Burlington summer school also received dental treatment.

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TABLE XXIII

DENTAL FOLLOW-UP - STATUS OF TREATMENT

1992

SITE	STATUS OF DENTAL TREATMENT RECEIVED		
	# CHILDREN NEED CARE	COMPLETE CARE	PARTIAL CARE
Brighton	76	65	0
Burlington	12	12	0
Commerce City	27	20	6
Fort Lupton	158	88	2
LaSalle	138	100	1
Gilcrest	93	39	18
Longmont	130	78	45
Fort Collins	30	23	3
Fort Morgan	80	54	2
Lamar	42	28	0
Rocky Ford	58	41	6
Pueblo	35	30	1
Alamosa Day School	129	79	10
Alamosa Night School	27	3	0
Grand Junction	31	28	3
Olathe	57	47	4
TOTAL	1,123	735	101

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TABLE XXIV

TYPE AND NUMBER OF DENTAL TREATMENT SERVICES IN DENTAL OFFICES

1992

SITE	DIAGNOSTIC	PREVENTIVE	RESTORED SURFACES	CROWNS/SPACE MAINTAINER	ENDODONTIC	ORAL SURGERY	SEALANTS	TOTAL SERVICES
Alamosa	304	0	316	12	21	35	0	688
Brighton	585	113	240	1	9	13	227	1,188
Burlington	35	0	68	0	0	13	0	116
Commerce City	199	27	77	1	2	7	174	487
Fort Collins	146	0	133	5	7	5	0	296
Fort Lupton	1,107	231	308	3	32	18	144	1,843
Fort Morgan	156	6	195	19	7	29	270	682
Gilcrest	77	10	177	0	8	18	39	329
Grand Junction	88	2	170	16	16	13	57	362
Lamar	117	3	146	12	11	1	82	372
LaSalle	342	0	362	36	11	34	9	794
Longmont	688	107	757	2	8	38	37	1,637
Olathe	148	7	176	22	12	21	202	588
Pueblo	136	38	175	8	9	8	147	521
Rocky Ford	86	0	211	0	22	8	0	327
TOTAL	4,214	544	3,511	137	175	261	1,388	10,230

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TABLE XXV

COST* OF DENTAL SERVICES PROVIDED IN DENTAL OFFICES BY TYPE

1992

SITE	DIAGNOSIS	PREV.	RESTORED SURFACES	CROWN SPACE MAINT.	ENDO.	ORAL SURGERY	SEALANTS	TOTAL
Alamosa	$2,216	$0	$6,351	$656	$625	$765	$0	$10,613
Brighton	100	0	600	100	100	100	0	1,000
Burlington	420	0	1,810	0	0	360	0	2,590
Commerce City	50	0	150	0	0	50	50	300
Fort Collins	580	0	1,995	290	170	120	0	3,155
Fort Lupton	100	0	1,300	100	100	100	100	1,800
Fort Morgan	624	90	3,567	684	273	435	297	5,970
Gilcrest	100	0	1,760	0	100	100	50	2,110
Grand Junction	252	28	2,371	460	268	173	142	4,294
Lamar	550	12	3,061	456	253	17	328	4,677
LaSalle	220	0	2,386	392	88	104	9	3,199
Longmont	225	100	3,577	100	150	300	50	4,502
Olathe	858	84	2,992	1,474	252	229	414	303
Pueblo	517	306	2,762	296	198	160	441	4,680
Rocky Ford	344	0	2,087	0	176	40	0	2,647
TOTAL	$7,156	$620	$37,369	$5,008	$2,753	$3,053	$1,881	$57,840

*Includes cost from all sources except medicaid.

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TABLE XXVI

PREVENTIVE DENTAL SERVICES BY DENTAL HYGIENISTS
Prophylaxis, Topical Fluoride Application, Dental Counseling

1992

SITE	# SCREENED	RECEIVING PREVENTIVE SERVICES	
		NUMBER	PERCENTAGE
Brighton	154	136	88
Commerce City	50	45	90
Fort Lupton	271	250	92
LaSalle	225	209	73
Gilcrest	145	114	79
Longmont	141	139	99
Fort Collins	52	37	71
Fort Morgan	111	83	75
Lamar	96	82	85
Rocky Ford	119	102	86
Pueblo	79	78	99
Alamosa Day School	277	237	86
Alamosa Night School	55	23	42
Grand Junction	48	47	98
Olathe	116	98	84
TOTAL	1,939	1,680	87%

TABLE XXVII

GROUP HEALTH EDUCATION SERVICES BY NURSES

1992

SITE	FAMILY NIGHT PRESENTATIONS		CLASSROOM EDUCATION		STAFF IN-SERVICES	
	# SESSIONS	# PEOPLE	# SESSIONS	# PEOPLE	# SESSIONS	# PEOPLE
Alamosa	0	0	16	432	2	8
Brighton	1	200	3	223	0	0
Delta	7	321	22	333	0	0
Fort Collins	1	80	10	184	0	0
Fort Lupton	1	200	28	505	2	20
Fort Morgan	1	60	7	117	2	24
Gilcrest	0	0	49	475	2	15
Grand Junction	0	0	8	200	0	0
Lamar	1	20	2	30	0	0
LaSalle	2	86	8	124	8	15
Longmont	1	20	7	306	7	48
Pueblo	1	40	4	200	1	6
Rocky Ford	1	6	11	279	1	15
TOTAL	18	1,033	205	3,408	25	151

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TABLE XXVIII

GROUP HEALTH EDUCATION SERVICES BY DENTAL HYGIENISTS/DENTAL STUDENTS

1992

SITE	FAMILY NIGHT PRESENTATIONS		CLASSROOM EDUCATION		STAFF IN-SERVICES	
	# SESSIONS	# PEOPLE	# SESSIONS	# PEOPLE	# SESSIONS	# PEOPLE
Alamosa	0	0	6	295	0	0
Brighton	0	0	0	0	0	0
Commerce City	0	0	0	0	0	0
Delta/Olathe	0	0	11	80	0	0
Fort Collins	0	0	7	79	0	0
Fort Lupton	0	0	19	431	0	0
Fort Morgan	1	250	7	48	0	0
Gilcrest	0	0	1	105	0	0
Grand Junction	0	0	0	0	0	0
Lamar	1	50	2	89	0	0
LaSalle	0	0	4	32	0	0
Longmont	1	26	3	102	1	26
Pueblo	1	75	8	92	0	0
Rocky Ford	0	0	0	0	0	0
TOTAL	4	401	68	1,353	1	26

TABLE XXIX

CHILDREN ENROLLED IN MEDICAID

1992

SITE	CHILDREN ENROLLED IN MEDICAID
Alamosa	25
Brighton	5
Burlington	15
Commerce City	4
Fort Collins	11
Fort Lupton	1
Fort Morgan	0
Gilcrest	1
Grand Junction	1
Lamar	23
LaSalle	23
Longmont	1
Olathe	9
Pueblo	6
Rocky Ford	24
TOTAL	149

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TABLE XXX
COLORADO MIGRANT HEALTH PROGRAM
ADOLESCENT HEALTH RISK ASSESSMENT*
GILCREST NIGHT PROGRAM
1992

1992	ENG.	SPAN.	MALE	FEMALE	TOTAL
Use a seat belt 75% or more	43%	54%	41%	54%	47%
Feels bored at least once a week	15%	27%	12.5%	28%	20%
Don't know what they want to do in their future	16%	15%	23%	7%	16%
School grades are less than a C	18%	5%	18%	7%	13%
Not satisfied with body; too fat or too thin	52%	34%	43%	48%	45%
Family is unable to solve problems	13%	5%	11%	9%	10%
The adult who cares about them is not one of their parents.	8%	22%	18%	9%	14%
Ever tried smoking	41%	12%	41%	15%	29%
Ever tried chewing	15%	2%	18%	0%	10%
Smokes 10+ cigarettes per day	7%	0%	5%	2%	4%
Ever used alcohol	52%	37%	52%	39%	46%
Used alcohol in the last 30 days	30%	12%	30%	13%	23%
Ever used marijuana	5%	0%	5%	0%	3%
Used other illicit drugs	0%	0%	0%	0%	0%
Child of an alcoholic	10%	15%	9%	15%	12%
History of sexual abuse	3%	0%	0%	4%	12%
Thought of suicide in past month	0%	0%	0%	0%	0%
Knows someone who committed suicide	3%	2%	2%	4%	3%
Sexually active	33%	7%	32%	11%	23%
Uses protection	70%	100%	78%	60%	74%
More than one partner in lifetime	50%	0%	56%	0%	43%

1992	ENG.	SPAN.	MALE	FEMALE	TOTAL
Ever been pregnant or gotten someone pregnant	5%	0%	4%	2%	3%
Ever had an STD	2%	0%	2%	0%	1%
BIGGEST WORRY:					
•future/school	18%	22%	21%	17%	19%
•getting AIDS	11%	49%	16%	0%	9%
•getting pregnant	8%	0%	2%	9%	5%
•concerned about family	10%	12%	9%	13%	11%
•death	7%	0%	7%	0%	4%
•none	36%	54%	37.5%	50%	43%
ASSESSED AS LOW, AVERAGE OR A HIGH RISK ADOLESCENT:					
Low	57%	80%	66%	65%	66%
Average	19%	13%	9%	26%	17%
High	24%	7%	25%	9%	17%

*102 students surveyed